DISPLAY CONTROL METHOD, DISPLAY CONTROL DEVICE, AND GAME MACHINE

Background of the Invention

[0001] Technical Field of the Invention

[0002] The present invention relates to a display control method for displaying a reach-state display image and a win display image on a display portion of a game machine based on a production pattern, a display control device, and a game machine.

[0003] Description of the Related Art

[0004] Generally, in pachinko machines (game machines) for generating a winning state as a result of a lot drawing, an image display device for displaying a display image is mounted on a central area of a game board. At that time, there is an approach that such pachinko machines (for example, a pachinko machine disclosed in Japanese Unexamined Patent Application Publication No. 2000-296222) display various display images according to a production pattern when a "reach-state" or a "winning state" is generated so that players enjoy the games. Moreover, a pachinko machine for projecting a display image on the entire game board by a rear projection method in order to display the latest display image was disclosed. For example, Japanese

Unexamined Utility Model Registration Application Publication No. 7-24381 discloses a pachinko machine capable of projecting an image for a game on the entire light-transmittable image display portion (board surface) of a front panel (game board) by using a rear projection type projector.

[0005] Meanwhile, recently, there is quite a need for advertising using various image display means as advertisement mediums other than television sets. For example, advertising images are continuously displayed on large-sized outdoor display devices using LCDs, liquid crystal display devices mounted inside streetcars, and liquid crystal display devices for customers at registers installed in convenience stores. In view of this situation, pachinko machines for displaying various advertising images by using image display function recently appeared. These pachinko machines display the advertising images instead of images for games when players are not seated or games stop.

[0006] However, the conventional pachinko machines capable of displaying advertising images have problems as follows. The conventional pachinko machines display the advertising images only when the players are not seated or games stop. Therefore, since the displayed advertising images cannot be frequently seen by the players, the advertisement has little effect. At that time, it is

considered a method for displaying display images for a game intermittently to display advertising images quickly. However, this method has a problem in that since the advertising image is finely segmented, the player has difficulty precisely recognizing the contents of the advertisement, and that a principal display image for a game is not displayed smoothly. Thus, the player may feel uncomfortable. Therefore, utilizing this method is limited.

[0007] The present invention is made for overcoming the problems as described above. An object of the present invention is to provide a display control method, a display control device, and a game machine capable of recognizing an advertising image to a player precisely without the player feeling uncomfortable.

Summary

[0008] In order to achieve the above object, the present invention provides a display control method for displaying a reach-state display image and a win display image on a display portion of a game machine according to a predetermined production pattern in accordance with a result of a lot drawing by the game machine, wherein advertising images are displayed on the display portion by containing the advertising images in the display images according to the production pattern when at least one of the group

consisting of the reach-state display image and the win display image is displayed.

[0009] Moreover, according to an aspect of the display control method of the present invention, among the advertising images whose advertisement contents and/or display features are different from each other, an advertising image corresponding to the result of a lot drawing is chosen and contained in the display images so that the advertising image is displayed on the display portion.

[0010] According to other aspect of the display control method of the present invention, the advertising image based on advertising image data obtained through a communication network is contained in the display image to display the advertising images on the display portion.

[0011] Moreover, a display control device according to the present invention comprises a first memory for storing production pattern data concerning a production pattern of a display image; a second memory for storing display image data concerning the display image; and a controller for reading production pattern data predetermined in accordance with a result of a lot drawing by a main controller for a game machine from the first memory, reading the display image data from the second memory according to the production pattern defined by the production pattern data,

and displaying a reach-state display image and a win display image based on the display image data on a display device for the game machine; the display control device further comprises a third memory for storing advertising image data concerning advertising images, and the controller displays the advertising images on the display device for the game machine, the advertising images based on the advertising image data read from the third memory section according to the production pattern when at least one of the group consisting of the reach-state display image and the win display image being contained in the display image.

[0012] According to another aspect of the display control apparatus of the present invention, the third memory section stores the advertising image data concerning advertising images whose advertisement contents and/or display features are different from each other, and the controller reads the advertising image data corresponding to the result of a lot drawing from the third memory section to display the advertising images based on the advertising image data on the display of the game machine by containing the advertising images in the display image.

[0013] According to another aspect of the present invention, the display control device further includes a receiver for receiving the advertising image data through a communication network, wherein the controller stores data

received by the receiver in the third memory as the advertising image data concerning the advertising images (a display portion for the game machine).

[0014] Moreover, a game machine according to the present invention comprises the display control device, the main controller for the game machine, and the display device for the game machine.

[0015] According to an aspect of the game machine of the present invention, the display device for the game machine includes a display portion, and displays the display image on the display portion by projection light from rear portion of the display portion (game board).

[0016] According to the display control method, the display device for a game machine, and the game machine, since an advertising image is displayed on the display portion by containing the advertising image in the display images when at least one of the group consisting of the reach-state display image and the win display image is displayed, it is possible to display the advertising image as a part of a production pattern when the reach-state display image or the win display image is generated. Further, it is also possible to display the advertising image without causing discomfort to a player. Moreover, since a part of the reach-state display image and the win display image which is a principal display image in a game

is constructed by the advertising image, it is possible for the player to notice the advertising image sufficiently and securely. In addition, it is possible to continuously display the advertising image only for a predetermined time when the reach-state display image or the win display image is displayed, so thus it is possible for the player to notice the contents of the advertising image sufficiently and securely. Therefore, it is sufficient to have an effect for the advertisement. Moreover, since the advertising fee can be obtained from sponsors, it is possible to pass this on to the player in the form of output balls.

[0017] In addition, since it is possible to display advertising images contents of which are different from each other for the types of a reach-state or a winning state by displaying the advertising image including the advertisement contents or display features corresponding to the result of a lot drawing being contained in the display image, it is possible to display a plurality of advertising image types. Moreover, since the result of a lot drawing corresponds to the advertising image, for example, when it is defined that a winning state is generated at a high probability when a reach-state with a predetermined feature is generated, the player can forecast that a winning state may be generated at a high probability by the display of an advertising image corresponding to the reach-state so that it is possible for

the player to notice the advertising image sufficiently and securely. Further, by displaying a reach-state display image or a win display image containing an advertising image based on an advertising image data obtained through the communication network, the latest advertising image can be displayed. Furthermore, by constructing a display device for a game machine being able to display the display image on the display by projecting, it is possible to display the reach-state display image and the win display image, for example, on the entire display portion of a game board, so that the large advertising image can be displayed. Therefore, the advertisement effect is increased.

Brief Description of the Drawings

[0018] Fig. 1 is a front view showing a schematic construction of a pachinko machine 1.

[0019] Fig. 2 is a block diagram showing the construction of the pachinko machine 1.

[0020] Fig. 3 is a sectional side view showing a schematic construction of the pachinko machine 1.

[0021] Fig. 4 is a front view showing a game board 21 displaying a reach-state display image Gr.

[0022] Fig. 5 is a front view showing a game board 21 displaying a win display image Gh.

[0023] Fig. 6 is a flowchart of an image display process 40 executed by a display controller 12.

[0024] Fig. 7 is a flowchart of an image display command output process 50 executed by a main controller 3.

[0025] Fig. 8 is a front view showing a schematic construction of a slot machine 61.

[0026] Fig. 9 is a sectional side view showing a schematic construction of the slot machine 61.

[0027] Fig. 10 is a front view of the slot machine 61 displaying reach-state display images Gr61 and Gr62.

[0028] Fig. 11 is a front view of the slot machine 61 displaying win display images Gh61 and Gh62.

[0029] Fig. 12 is a front view showing a schematic construction of a pinball machine 81.

[0030] Fig. 13 is a sectional side view showing a schematic construction of the pinball machine 81.

Detailed Description

[0031] Preferable embodiments of a game machine according to the present invention will now be described with reference to the drawings.

[0032] First, a structure of pachinko machine (a game machine) 1 will now be described with reference to the drawings. The pachinko machine 1, for example, is a digital pachinko machine for generating a "win " by a lot drawing,

and as shown in Fig. 1, and is constructed to display a display image G1 (in this case, the display image may be the ground, Mt. Fuji, and numeral "123") and the like on a game board 21 by a rear projection method. More specifically, the pachinko machine 1, as shown in Fig. 2, includes a game unit 2, a main controller 3, a main memory 4, and a display device 5.

[0033] As shown in Fig. 3, the game unit 2 includes a game board 21 and an opening and closing mechanism 27. The game board 21, as depicted in Fig. 1, is rectangular in shape and entirely made of a light transmittable resin. A hitting ball is movable within a circular game section 21a (corresponding to the display portion of the present invention) defined by a frame member F. In this case, as shown in Fig. 3, the game section 21a is provided with a plurality of probes 22, 22, ... fixed thereto, a start chucker 23, a big hit prize hole 24, a hit prize holes 25 and 25 (See Fig. 1), and windmills 26 (See Fig. 1). In addition, the game board 21 is provided with a door 28 in which a transparent glass plate 28 is inserted in front of the game board 21. Meanwhile, a screen film 32 for projecting the display image G1 and the like is attached to a rear side of the game board 21. The opening and closing mechanism 27 is mounted on back of the game board 21 so as to open and close the big hit prize hole 24.

[0034] The main controller 3 (a main controller for a game machine) controls the game unit 2 and the display device 5 entirely. The main controller 3 displays various display images on the display device 5 by outputting various commands C corresponding to a game state. At that time, the commands C output by the main controller 3 includes an indication of the display order for displaying the display images (production pattern) or an indication of graphics constructing the display images. The main controller 3 executes a lot drawing when a hitting ball is in the start chucker 23 and outputs the commands C containing the indication of the display order corresponding to a result of a lot drawing which the lot is executed (not win, a reach-state (a state that the two figures which stop first match), and a win). In this case, when the "reach-state" is generated as a result of a lot drawing, the main controller 3 outputs a command C for displaying a reach-state display image Gr (See Fig. 4) containing an advertising image Gc with contents corresponding to the kinds of reach-states (the kind of reach-state itself such as a normal reach or a super reach-state, and the kind of numerals consisting reach-state, and the like). Further, when a win is generated, the main controller 3 outputs a command C for displaying a win display image Gh (See Fig. 5) containing the advertising images Gc with the advertising content

corresponding to the kind of the win (numeral comprised of a win). Furthermore, according to an aspect of the present invention, in the contents of the advertisement, a sponsor's name, a brand name, and a message are contained. The main memory 4 stores an operating program for the main controller 3.

[0035] The display device 5, as shown in Fig. 2, includes an image display optical portion 11, a display controller 12, a RAM 13, a display order data memory 14, a VRAM 15, an image data memory 16, and a data receiver 17. In this case, the display controller 12, the RAM 13, the display order data memory 14, the VRAM 15, the image data memory 16, and the data receiver 17 construct a display control device according to the present invention. The image display optical portion 11 corresponds to the display device for a game machine according to the present invention, and as shown in Fig. 3, includes the above game section 21a of the game plate 21, a projector unit 31, the screen film 32, a mirror 33, and a Fresnel lens 34. The projector unit 31 emits projection light L modulated based on the display image data Dg outputted by the display controller 12. More particularly, the projector unit 31 includes, for example, a light source lamp, modulating means (for example, a liquid crystal light valve including a liquid crystal panel, an incident polarizing plate, and an

emission polarizing plate) for modulating white light emitted from the light source lamp into projection light L, and a projecting lens for enlarging the projection light L (none are shown in the drawings). The screen film 32 is attached to the back side of the game board 21, receives the projection light L emitted by the projector unit 31, reflected by the mirror 33 and focuses various display images.

[0036] The mirror 33 reflects the projection light L emitted by the projector unit 31 toward the screen film 32. The Fresnel lens 34 converts the projection light L into a parallel light and project the converted parallel light on the screen film 32.

[0037] The display controller 12 generates and outputs the display image data Dg according to the command C outputted by the main controller 3 to output to the projector unit 31. Moreover, the display controller 12 stores the image data Dp received by the data receiver 17 in the image data memory 16. At that time, the display controller 12 updates old image data Dp corresponding to the received image data Dp and stores the updated image data Dp in the image data memory 16. The RAM 13 stores various data generated by the display controller 12 and the operation result of the display controller 12 temporally. The display order data memory 14 corresponds to the first memory of the

present invention, stores the display order data Ds used when the display image data Dg is generated or the operation program of the display controller 12. At that time, the display order data Ds corresponds to the production pattern data of the present invention. The display order data includes indication of the image data, a position or size for displaying the display image, and the display order (production pattern) such as indication of display time. The VRAM 15 stores the display image data Dg generated by drawing images corresponding to the image data Dp, Dp, ·· virtually by the display controller 12.

[0038] The image data memory 16 corresponds to a second memory and a third memory of the present invention, and stores the image data Dp, Dp, ·· for generating the display image data Dg. At that time, the image data Dp includes image data (corresponding to the advertising image data in the present invention) such as a character, a symbol and a graphic constructing the advertising image Gc, or image data such as the ground, Mt. Fuji, and numerals constructing the display image G1.

[0039] Moreover, the image data memory 16 stores image data Dp for an up-to-date advertising image Gc received by the data receiver 17 and transmitted by the display controller 12. In this case, the image data memory 16 updates the corresponding old image data Dp into the

transmitted image data Dp and stores the updated image data Dp. The data receiver 17 corresponds to the receiving section of the present invention, and is connected to a server exterior to the pachinko machine 1 through a LAN so that it receives the image data Dp for the up-to-date advertising image Gc inputted (obtained) through the communication network and transmitted by the server.

[0040] After this, the entire operation of the pachinko machine 1 will now be described with reference to the companying drawings. In the pachinko machine 1, if an electric power is supplied to the pachinko machine 1, at first, the main controller 3 outputs the command C for displaying the display image G1 at a first state, for example, as shown in Fig. 1. Corresponding to this, the display controller 12 performs an image display process 40 shown in Fig. 6. In the image display process 40, firstly, the display controller 12 checks the contents of the command C (Step 41). Next, the display controller 12 reads the display order data Ds indicated in the command C from the display order data memory 14 (Step 42) and specifies image content to be displayed. The display controller 12 reads image data Dp, Dp, ·· necessary for generating the display image data Dg for displaying the display image G1 from the image data memory 16 according to the display order specified by the display order data Ds (Step 43).

Continuously, the display controller 12 generates the display image data Dg by storing images corresponding to the read image data Dp, Dp, ·· respectively in the VRAM 15 (Step 44). Next, the display controller 12 outputs the generated display image data Dg to the projector unit 31 (Step 45). Hereinafter, the display controller 12 repeatedly performs the steps 41 to 45 until new command C is outputted.

[0041] Meanwhile, the projector unit 31 emits the projection light L for displaying the display image G1 based on the output display image data Dg. Next, the outputted projection light L is reflected by the mirror 33 and converted into a parallel light by the Fresnel lens 34 so as to be projected onto the screen film 32. By doing so, as shown in Fig. 1, the display image G1 focused by the screen film 32 is displayed on the game section 21a of the game plate 21.

[0042] Continuously, the game is begun and when a hitting ball is at the start chucker 23, the main controller 3 draws lots and performs the image display command output process 50 as shown in Fig. 7. In the image display command output process 50, firstly, the main controller 3 outputs the command C for displaying the display image indicating the machine is now drawing lots (Step 51). The display image indicating under drawing lots, for example, includes an image constructed with three consecutive numerals

scrolling from 1 to 9. Next, the display controller 12 performs the image display process 40 according to the command C and the projector unit 31 emitted the projection light L so that the display image indicating the machine is now under drawing lots is displayed on the game section 21a.

[0043] After this, the main controller 3 determines whether the reach-state is generated by a lot drawing or not (Step 52). At this time, when the reach-state is not generated (no win), the main controller 3 outputs a command C for displaying the display image for indicating the result of lots in which the scroll speed of the scrolling three consecutive numerals in the display image indicating that the machine is now drawing lots is gradually decreased and scroll eventually stops to show the result(Step 53), after this, the image display command output process 50 is ended. At that time, the display controller 12 performs the image display process 40 according to the command C, and the projector unit 31 emits the projection light L, so that the display image for indicating the result of a lot drawing is displayed on the game section 21a.

[0044] Meanwhile, in the step 52, when the reach-state is generated, the main controller 3, as shown in Fig. 4, outputs a command C for displaying the reach-state display image Gr (Step 54). According to this, the display controller 12 performs the image display process 40 so as to

display the reach-state display image Gr on the game section 21a. At this time, as shown in the same drawing, the reach-state display image Gr includes an image comprised of numerals of three digits whose first digit and a third digit are fixed to "7" (seven) and a second digit is scrolling, and an advertising image Gc with the contents corresponding to the generated reach-state (corresponding to the result of a lot drawing) (in this example, an advertising image of gum).

[0045] Next, the main controller 3 determines whether a winning state has been generated or not (Step 55). At that time, when a winning state has not been generated (no win), the main controller 3 outputs a command C for displaying the display image for indicating the result of a lot drawing by performing the step 53. Consequently, the display controller 12 performs the image display process 40 so that a display image in which the scroll speed of the second digit of the reach-state display image Gr (See Fig. 4) is gradually decreased and scroll stops (the stopped second digit numeral is different from the first digit numeral and the third digit numeral) is displayed.

[0046] Meanwhile, in the step 55, when the main controller 3 determines that a winning state has been generated, the main controller 3 outputs a command C for displaying the win display image Gh shown in Fig. 5 (Step

56). Therefore, the display controller 12 performs the image display process 40 so as to display the win display image Gh on the game section 21a. At that time, as shown in the same drawing, the win display image Gh includes, for example, an image in which the first digit and the third digit are fixed to "7" (seven) and the second digit numeral is fixed to the same numeral as the first and third digit numeral (for example, "7" (seven)), then the scroll speed of the second digit numeral is gradually decreased and scroll consequently stops, and an advertising image Gc (in this example, an advertising image for "supermarket") containing the advertising contents corresponding to the win (corresponding to the result of a lot drawing).

[0047] The main controller 3 opens the big hit prize hole 24 with respect to the opening and closing mechanism 27, for example, only 15 times. Next, the main controller 3 outputs a command C for displaying and an ending image producing an ending of a winning state when the opening of the big hit prize hole 24 is finished (a winning state is finished) (Step 57), and then, the image display command output process 50 is completed. Meanwhile, the display controller 12 performs the image display process 40 according to the command C outputted by the main controller 3. In this regard, the ending image is displayed on the game section 21a. After this, whenever the start chucker 23

wins, the main controller 3 performs the image display command output process 50. At that time, when a reach-state with a different feature from that of the above-described reach-state (for example, a reach-state whose first and third digit numerals are not "7", or a different reach-state itself) is generated by a lot drawing, the main controller 3 outputs a command C for displaying the reach-state display image Gr including the advertising image Gc containing the advertising contents corresponding to the reach-state with the feature different from the above-described advertising image Gc (the advertising image for "gum"). In the same manner, when a winning state with a different feature from that of the above a winning state (for example, a winning state whose three digit numerals are not "777") is generated by a lot drawing, the main controller 3 outputs a command C for displaying the win display image Gh including the advertising image Gc containing the advertising contents corresponding to the winning state with the feature different from the above-described advertising image Gc (the advertising image for "supermarket").

[0048] As described above, according to the pachinko machine 1, the display controller 12 display the reach-state display image Gr and the win display image Gh with an advertising image Gc included therein on the display device 5. Since the above pachinko machine 1 is capable of

displaying the advertising image Gc as a part of a production pattern when the reach-state or the winning state has been generated, it is also possible to display the advertising image Gc without causing discomfort to a player. Moreover, since a part of the reach-state display image Gr or the win display image Gh which is a principal display image in a game is constructed by the advertising image Gc, the more the player concentrates on the game, the more surely the player can be made to sufficiently notice the advertising image Gc. In addition, it is possible to continuously display the advertising image Gc only for a predetermined time when the reach-state display image Gr or the win display image Gh is displayed, so thus it is possible for the player to notice the contents of the advertising image Gc sufficiently and securely. Therefore, it is possible to sufficiently increase an effect of the advertising. Moreover, since the advertising fee can be obtained from sponsors, it is possible to pass this on to the player in the form of output balls.

[0049] In addition, since it is possible to display advertising images Gc contents of which are different from each other for the types of the reach-state or the winning state by displaying a reach-state display image Gr and a win display image Gh including the advertising image Gc corresponding to the result of a lot drawing, it is possible

to display a plurality of advertising image Gc types. Moreover, since the result of the lot drawing corresponds to the advertising image Gc, for example, when it is defined to generate a winning state at a high probability when a reach-state with a predetermined figure is generated, the player can forecast that a winning state may be generated at a high probability by the display of an advertising image Gc corresponding to the reach-state so that it is possible for the player to notice the advertising image Gc sufficiently and securely. Further, since the display controller 12 displays the reach-state display image Gr or a win display image Gh containing an advertising image Gc based on the latest advertising image data Dp inputted sequentially through the communication network in an order regularly or irregularly, it is possible to display the latest advertising image Gc. Furthermore, since it is possible to display the reach-state display image Gr and the win display image Gh on the entire game section 21a by constructing the image display optical portion 11 capable of projecting the display image on the game section 21a of the game board 21, for example, the large advertising image Gc can be displayed. Therefore, the advertisement effect is increased.

[0050] Next, a slot machine (game machine 61) according to another embodiment of the present invention will be

described with reference to the accompanying drawings. The present invention is applied basically to the slot machine 61 or a pinball machine 81 to be described later, the same as the pachinko machine 1.

[0051] Therefore, the same elements as the elements of the pachinko machine 1 are indicated with same numerals as the pachinko machine 1 and the description will be omitted. A slot machine 61 shown in Fig. 8, includes a game unit 62 and an image display optical section 63 provided inside a main body of the machine as shown in Fig. 9. The game unit 62 ejects coins (medals or tokens) under the control of the main controller 3. The image display optical section 63 corresponds to the display device for the game machine according to the invention, and as shown in the same drawing, includes display portions 71a and 71b made of a light transmittable resin, screen films 72a and 72b attached to the displays 71a and 71b respectively, Fresnel lenses 73a and 73b, mirrors 74a, 74b, and 74c, and a projector unit 31. In this case, as shown in the same drawing, the mirrors 74a and 74b reflect a part of the projection light L emitted from the projector unit 31 toward the Fresnel lens 73a (the screen film 72a). Moreover, the mirror 74c reflects another part of the projection light L toward the Fresnel lens 73b (the screen film 72b).

[0052] In the slot machine 61, when electric power is applied, the main controller 3 outputs a command C for displaying display images G61 and G62 of an initial state as shown in Fig. 8. Corresponding to this, the display controller 12 outputs display image data Dg by performing the image display process 40. Next, the projector unit 31 projects the projection light L based on the display image data Dg. At that time, as shown in Fig. 9, a part of the projection light L is reflected toward the Fresnel lens 73a by the mirrors 74a and 74b. Moreover, another part of the projection light L is reflected toward the Fresnel lens 73b by the mirror 74c. In this regard, the projection light L is projected on the screen films 72a and 72b, and as shown in Fig. 8, the display images G61 and G62 of the initial state are displayed on the display 71a and 71b, respectively. At that time, three reel images G61a, G61b, and G61c (for example, images in which "BAR/BAR", "3", and "BAR" are displayed in the same drawing) imitating a reel shape are displayed as the display image G61. Meanwhile, as the display image G62, an image of a table indicating the number of ejected coins is displayed.

[0053] After this, when the game starts and a handle lever 64 (See Fig. 8) is pulled (or start button is depressed), the main controller 3 performs the image display command output process 50 simultaneously with drawing a lot.

At that time, first, the main controller 3 outputs a command C for displaying a display image indicating the machine is now drawing a lot (Step 51). Next, the display controller 12 performs the image display process 40 according to the command C and the projector unit 31 emits the projection light L. In this regard, the display image indicating the machine is now drawing a lot is displayed on the displays 71a and 71b. At that time, on the display 71a, three reel images in which a plurality of pictures are scrolling, are displayed.

[0054] Next, the main controller 3 determines whether a reach-state is generated by a lot drawing or not (Step 52). At that time, if the reach-state is not generated, the main controller 3 outputs a command C for displaying a display image indicating the result of the lot drawing of no-win (Step 53), and the display image includes three reel images whose scroll speed is gradually decreased and consequently are stopped at a state of displaying pictures being different from each other. Then the image display command output process 50 is completed. At that time, the display controller 12 performs the image display process 40 according to the command C so that the display image indicating the result of the lot drawing is displayed on the displays 71a and 71b.

[0055] Meanwhile, in the step 52, if the reach-state is generated, the main controller 3 outputs a command C for displaying reach-state display images Gr61 and Gr62 as shown in Fig. 10 (Step 54). Corresponding to this, the display controller 12 performs the image display process 40 so that the reach-state display images Gr61 and Gr62 are displayed on the display portions 71a and 71b, respectively. At that time, as shown in Fig. 10, as the reach-state display image Gr61, for example, reel images G62a and G62b stopped at a state of displaying the same graphics (in this case, "BAR/BAR") and the reel image G62c in which a plurality of pictures are scrolling are displayed. Meanwhile, as the reach-state display image Gr62, the advertising image Gc (in this example, the advertising image of gum) having advertising contents corresponding to the generated reach-state (corresponding to the result of the lot drawing), and a numeral indicating the number of ejected coins in case of bingo (jackpot), which varies every second, are displayed.

[0056] Next, the main controller 3 determines whether a winning state has been generated or not (Step 55). At that time, when a win has not been generated (no win), the main controller 3 outputs a command C for displaying a display image indicating the result of the lot drawing by performing the step 53. Corresponding to this, the display controller 12 performs the image display process 40, so that

the scroll speed of the reel image G62c in the reach-state display image Gr61 (See Fig. 10) is gradually decreased and a display image that stops at a picture different from the reel images G62a and G62b is displayed.

[0057] Meanwhile, in the step 55, if the main controller 3 determined that a win has been generated, the main controller 3 outputs a command C for displaying win display images Gh61 and Gh62 as shown in Fig. 11 (Step 56). Correspondingly, the display controller 12 performs the image display process 40 so that the win display images Gh61 and Gh62 are displayed on the displays 71a and 71b, respectively. At that time, as shown in Fig. 11, as the win display image Gh61, for example, the reel images G63a and G63b being stopped at a state of displaying the identical graphics (in this case, "BAR/BAR"), and the reel image G63c whose scroll speed is gradually decreased and eventually stopped at a state of displaying a graphic identical with the reel images G63a and G63b (in this case, "BAR/BAR") are displayed. Moreover, as the win display image Gh62, an animation image with fireworks, a numeral indicating a number of ejected coins, and the advertising image Gc (as an example in this case, an advertising image for "supermarket") containing the contents corresponding to the generated winning state (corresponding to the result of the lot drawing) are displayed.

[0058] Continuously, the main controller 3 ejects the coins the number of which corresponds to the generated win with respect to the game unit 62. Next, when the ejection of the coins is finished (a win is finished), the main controller 3 outputs a command C for displaying the ending image (not shown) for producing the ending of winning state (Step 57), after this, the main controller 3 finishes the image display command output process 50. Corresponding to this, the display controller 12 performs the image display process 40 so that the ending image is displayed on the display portions 71a and 71b. After this, whenever the handle lever 64 is pulled, the main controller 3 performs the image display command output process 50. At that time, when a reach-state whose feature is different from that of the above reach-state (for example, a reach-state when the pictures of the reel images G62a and G62b in the reach-state display image Gr61 are other than "BAR/BAR") is generated by a lot drawing, the main controller 3 outputs a command C for displaying the reach-state display image Gr62 including the advertising image Gc containing the advertising contents corresponding to the reach-state of the feature and different from the above-described advertising image Gc (the advertising image for "gum"). In same manner, when a win whose feature is different from that of the above-descried win (for example, a win when the picture of the reel images

G63a, G63b, and G63c in the win display image Gh61 is other than "BAR/BAR") is generated by lot, the main controller 3 outputs a command C for displaying the win display image Gh62 including the advertising image Gc containing the advertising contents corresponding to the win and being different from the above-described advertising image Gc (the advertising image for "supermarket").

[0059] As described above, even in the case of the slot machine 61, when the display controller 12 displays the reach-state display images Gr61 and Gr62 and the win display images Gh61 and Gh62 on the display device 5 by including the advertising image Gc, it is possible to display the advertising image Gc as a part of a production pattern in which the reach-state or win has been generated. Therefore, it is also possible to display the advertising image Gc without causing discomfort to a player. In addition, it is possible to continuously display the advertising image Gc for a predetermined time when the reach-state display images Gr61 and Gr62 or the win display images Gh61 and Gh62 are displayed, so that it is possible for the player to notice the contents of the advertising image sufficiently and securely.

[0060] Moreover, the slot machine is not limited within the construction as described above. For example, instead of displaying the display image (G61 and so on) including

the reel images (G61a, G61b, G61c and so on), it is possible to construct a slot machine including a mechanical reel which actually rotates in accordance with the operation of the handle lever 64 (or start button).

[0061] Moreover, a game machine according to the present invention includes a pinball machine or the like other than the pachinko machine and the slot machine. For example, the pinball machine 81 shown in Fig. 12 includes a game board 82 functioning as a display device of the present invention on which various accessories are attached, a screen film 83 attached on the back side of the game board 82, a Fresnel lens 84, and a mirror 85 as shown in Fig. 12and Fig. 13. The game board 82 is made of a light transmittable resin and is disposed on the upper side of the main body of the machine. In this pinball machine 81, games are executed by moving a ball between the game plate 82 and a glass plate 86 provided on the top of the main body of the machine. In the pinball machine 81, for example, when a ball is in a hit prize hole 87, the main controller 3 performs the lot, adds points (bonus points) in accordance with the result of a lot drawing, and performs the above-mentioned image display command output process 50. Moreover, in the pinball machine 81, the display controller 12 performs the image display process 40 according to the command C outputted from the main controller 3, so that a

reach-state display image including the advertising image Gc or the win display image Gh81 including the advertising image Gc shown in Fig. 12 is displayed on the game board 82.

[0062] Even in case of the pinball machine 81, when the display controller 12 displays the reach-state display image and the win display image Gh81 on the display device 5 by including the advertising image Gc, it is possible to display the advertising image Gc as a part of a production pattern when the reach-state or winning state is generated, like the pachinko machine or the slot machine 61. Therefore, it is also possible to display the advertising image Gc without causing discomfort to a player.

[0063] Moreover, the present invention is not limited to the embodiments describe above. For example, it is to be understood that even though the present invention has been described the case in which a display device 5 is provided in the pachinko machine 1, the slot machine 61, and the pinball machine 81, the present invention is not limited to the aforementioned embodiments, and may be applied, for example, to arcade game machines. In addition, the present invention has been described with various embodiments, such as the pachinko machine 1 or the slot machine 61, including the image display optical section 11 and 63 for projecting the display image. However, it can be understood that the present invention may be applied to a display unit

constructed with LEDs instead of the image display optical section 11, a liquid crystal panel, and a CRT.

[0064] Moreover, even though the present invention has been described with respect to the embodiments of displaying the advertising image Gc including different advertising contents for types of reach-states and bingos and contained in the display image, however, the present invention may be applied to the display including the advertising image Gc having the same advertising contents regardless of the types of reach-states and bingos. Furthermore, it is possible to include the advertising image Gc in the display image only when the reach-state has been generated or only when the winning state has been generated. Furthermore, it is possible that the advertising image Gc having the same advertising contents but having a different display feature such as display colors or character is switched whenever a reach-state or a winning state is generated and included in the reach-state display image Gr and the win display image Gh .

[0065] Moreover, even though the present invention has been described with reference to the embodiments in that the data receiver 17 is connected to the display controller 12, the display controller 12 stores the image data Dp received by the data receiver 17 into the image data memory 16. However, it can be understood that the present invention may

be modified to a construction in that the data receiver 17 is connected to the main controller 3, and the main controller 3 stores the image data Dp received by the data receiver 17 into the image data memory 16 directly or through the display controller 12. Furthermore, the content of a process of the above-described image display command output process 50 is an example, and the process sequence may be modified properly.

[0066] The entire disclosure of Japanese Patent Application Nos. 2002343965 filed November 27, 2002 and 2003-176407 filed June 20, 2003 are incorporated by reference herein.